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Interested committees:

Title: Draft BS EN 18250 Soil improvers and growing media - Plugs - Determination of the dimensions, volume and bulk density.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

English Version

Soil improvers and growing media - Plugs - Determination of the dimensions, volume and bulk density

Amendements du sol et supports de culture - Plugs -
Détermination des dimensions, du volume et de la
masse volumique apparente

Bodenverbesserungsmittel und Kultursubstrate - Plugs
- Bestimmung der gemessenen Abmessungen und der
Schüttdichte

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 223.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 18250:2025) has been prepared by Technical Committee CEN/TC 223 “Soil improvers and growing media”, the secretariat of which is held by NEN.

This document is currently submitted for CEN Enquiry.

This document has been prepared under a standardization request given to CEN by the European

Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

Introduction

This document has been developed to provide a standardized method to measure and weigh plugs and to calculate their volume and bulk density.

It is important for consumers, manufacturers, and traders to know the volume of a plug product when placed on the market. For the cultivation of plants, it is critical that the volume of the plug corresponds to the chosen cultivation technique, e.g. when propagating seedlings in trays having specific-sized rooting units.

The bulk density is crucial as the reporting of all chemical analytical results is expressed in units of mass per volume, and the volume is determined from the mass of the sample used for the chemical analyses.

Pre-shaped growing media can be made from mineral wool, synthetic materials and others from stabilized organic materials. Plugs can be pre-shaped and non-preshaped.

1 Scope

This document specifies a method for the determination of the dimensions, volume and the bulk density of pre-shaped and non pre-shaped plugs.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CEN/TS 17732:2022, *Soil improvers and growing media — Terminology*

EN 12579:2024, *Soil improvers and growing media — Sampling*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in CEN/TS 17732:2022 and the following apply.

3.1

length

l

longest linear dimension of the major surface of the regular rectangular plug, expressed in millimetres (mm)

3.2

width

w

shortest linear dimension of the major surface of the regular rectangular plug measured at right angles to the length, expressed in millimetres (mm)

3.3

height

h

linear dimension measured from top to bottom of the plug, expressed in millimetres (mm)

3.4

diameter

D

average distance between two points taken transversally of the conical or cylindrical plug at its widest and thinnest part of the truncated conical form, expressed in millimetres (mm)

3.5

bulk density

p_b

ratio of the plug's mass to its total volume

Note 1 to entry: The bulk density is expressed in grams per litre (g/l) or in kilograms per cubic metre (kg/m³).

3.6

plug

small, self-contained unit of growing medium, used for plant propagation

Note 1 to entry: Typically, plugs have a size from 1 ml up to 100 ml.

3.7

pre-shaped plug

small, solid, uniform shaped, stable growing medium, which does not require reconstitution by wetting (other than blocks) and is ready to use for propagation, including rooting of seedlings or plant material

Note 1 to entry: The bulk density is expressed in grams per litre (g/l) or in kilograms per cubic metre (kg/m³).

3.8

non pre-shaped plug

small unit of growing medium, other than pre-shaped plugs, used for propagation, including rooting of seedlings or plant material

Note 1 to entry: Non pre-shaped plugs can require reconstitution.

3.9

block

pre-shaped growing medium, possibly containing holes to take plugs

Note 1 to entry: Blocks are generally used for propagation purposes.

Note 2 to entry: Blocks can vary in size.

3.10

pressed tablet

compressed non pre-shaped plug, composed of organic components (such as peat, coir or wood fibre) and which requires reconstitution with water

3.11

plug holder

small container of the size of a plug, with openings for roots

4 Principle

The plug is placed on a flat surface.

For regular rectangular material, measurements of the dimensions length, width and height are taken. For (truncated) conical plugs and cylindrical plugs, measurements of the dimensions height and diameter are taken.

NOTE These measurements are made to determine the dimensions, but are not to be used for the volume calculation.

The volume is determined using the pycnometer's method (see 8.3.2) [1].

The bulk density is calculated based on the weight and volume of the plug.

5 Apparatus

The following laboratory apparatus shall be used.

5.1 Flat surface, horizontal, flat stable surface, e.g. table top, which is large enough for the plug and the measuring devices.

5.2 Metal rule or metal tape, graduated in millimetres and permitting reading to 0,5 mm or less.